CASE No. 2

THE INTERNATIONAL CODE PROVISIONS ON FAMILY-GROUP NAMES AND THEIR EFFECTS ON TRILOBITE TAXONOMY (Z.N.(S.) 1538)

By J. T. Temple (*Birkbeck College, London*)

The *Règles internationales de la Nomenclature zoologique* (1905) as drawn up by the Berlin Congress of 1901 and emended by several later Congresses (notably Budapest 1927) did not legislate for family-group names beyond prescribing the endings of family and subfamily names and the dependence of these names on that of the type-genus (Arts. 4 & 5). In particular, the Law of Priority (Art. 25) which determined the availability as well as the priority of names applied only to generic and specific names.

The Paris Congress of 1948 approved a recommendation that the wording of Arts. 4 & 5 should be expanded to clarify the ideas of selection and designation of a type-genus for a family, but did not legislate further, and referred the whole problem of family-group names to the Secretary of the Commission for him to make a thorough study (1950, *Bull. zool. Nomencl.* **4** : 138).

The results of this study were presented to the XIV Congress in Copenhagen, 1953, which recommended the insertion of several provisions relating to family-group names into the *Règles*. The most important of these for the present purpose is para. 52 (*Copenhagen Decisions* 1953 : 35) :—

> " The Colloquium recommends that a provision should be inserted in the *Règles* prescribing that a name given to a taxon of the Family-Group is to be treated as having been published with an indication through the incorporation into it of a basic portion of the name of its type genus. The Colloquium proposes, however, that a *Recommandation* should be inserted urging authors when publishing a name for a new taxon belonging to a category in the Family-Group to give a diagnosis of the characters relied upon for distinguishing that taxon from allied taxa previously named."

There are two points of interest in this paragraph. Firstly, the provision concerning publication of a family-group name with an indication referred presumably to Art. 25(a) of the *Règles* where an indication was (together with the application of binomial nomenclature) a sufficient criterion for the availability of names published before 1 January 1931 ; but Art. 25 refers only to generic and specific names, and although the Copenhagen Congress discussed this Article (*Copenhagen Decisions* 1953 : 60–66) it did not expand its province to cover family-group names. The provision in the first part of para. 52 could not, therefore, be put into effect. Secondly, the latter part of the paragraph urging authors to publish a diagnosis of a new family-group taxon was not a mandatory provision, but a *Recommandation*, and even with this limited force it could only operate from the date of publication of the *Copenhagen Decisions* (31 December 1953).

Bull. zool. Nomencl., Vol. 19, Part 6. December 1962.

In practice, therefore, after the publication of the *Copenhagen Decisions* there was still no legislation on the criteria of availability of family-group names except for the prescribed endings and the necessity of incorporating the stem of the name of the type-genus ; and this state of affairs continued until the recent (6 November 1961) publication of the *International Code of Zoological Nomenclature* adopted by the XV Congress in London, 1958.

The most important change in the new Code as it affects families is the widening of the old Law of Priority to cover all names, including family-group names. The provisions are now embodied in Arts. 12, 13 & 16 as follows :—

> "**Article 12. Names published before 1931.**—In addition to satisfying the provisions of Article 11, a name published before 1931 must have been accompanied by a description, definition, or indication."
>
> "**Article 16**(a).—The word " indication " as used in this Chapter applies only to the following :
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> . . . .
>
> (iv) the formation of a new family-group name from the stem of the name of a genus, which thus becomes the type-genus ;
>
> . . . ."
>
> "**Article 13. Names published after 1930.**—
>
> (a) **Names in general.**—In addition to satisfying the provisions of Article 11, a name published after 1930 must be either
>
> (i) accompanied by a statement that purports to give characters differentiating the taxon ; or
>
> (ii) accompanied by a definite bibliographic reference to such a statement ; or
>
> (iii) proposed expressly as a replacement for a pre-existing available name."

In brief, therefore, a diagnosis has been made mandatory for any family-group name published after 1930, and the effect is to invalidate any name proposed since then without a diagnosis. The difference from the *Copenhagen Decisions* is extreme : Copenhagen suggested a *Recommandation* for future guidance of authors ; the new Code imposes mandatory provisions which are made retrospective by thirty years. Such retrospective legislation may be contrasted with the action of the Budapest Congress in 1927 which first made diagnoses mandatory at specific and generic level but post-dated this provision by three years until the end of 1930. Retrospective legislation is as unfortunate in zoological nomenclature as in any other context, and it seems likely that the new provisions will upset a number of generally accepted family-group names.

Among the trilobites the families that will be affected are listed below together with those where there is uncertainty over the interpretation of the new provisions. The *Treatise on Invertebrate Paleontology* Part O Arthropoda 1 (1959) has been taken as a convenient (if not in all cases entirely representative) guide to current usage, and family names accepted therein are printed in **BOLD CAPITALS**, the names of their authors or of authors who have subsequently (though usually inadvertently) made available previously unavailable families being in **Bold lower case.** Family names printed in ROMAN CAPITALS are those available but not in current use ; family names printed in Roman lower case are those which are neither available nor in current use. The letters d or nd following a page reference indicate that an author has or has not given a diagnosis of the family in question. The original spelling of family names is given, the corrected form following in square brackets.

ACANTHOPYGINAE Přibyl & Erben, 1952 : 141 nd. Listed as nov. subfam. **Přibyl 1953** : 19 nd (as replacement for Euarginae Gürich, 1901). In Treatise (: 503) *Acanthopyge* is referred to Ceratarginae Tripp, 1957 : 117 d. *Note*—Acanthopyginae is accepted here to have been proposed as a replacement name, although it was not explicitly stated to be such by Přibyl 1953 : 19, 25.

ALOKISTOCARIDAE Resser, 1939: 51 nd. Available from **Hupé 1953**: 190 d.

AMECEPHALINAE Kobayashi, 1936 : 170 nd (apparently used inadvertently in place of Pterocephalinae K., 1935). Available from **Hupé 1953** : 192 d (introduced as new). *Amecephalus* is considered in Treatise (: 238) a junior subjective synonym of *Alokistocare*, which is referred to Alokistocaridae Resser, 1939 (*q.v.*)

Bathycheilinae Přibyl, 1953 : 19 nd (monotypic). Treatise (: 453) refers *Bathycheilus* to Calymeninae Burmeister, 1843.

BATHYURISCIDAE Richter, 1932 : 855 nd. Introduced again by Poletaeva 1936: 31 nd (Bathyuriscinae, as new). Available from **Hupé 1953**: 183 d (Bathyuriscinae, as new). A synonym of Dolichometopidae Walcott, 1916, in Treatise (: 220).

BAVARILLINAE Sdzuy, 1957: 276 d ? (monotypic). Diagnosis in Sdzuy 1959 (Treatise : 455 d).

Bigotinopsidae Hupé, 1960 : 77 nd.

BREVIDISCINAE Kobayashi, 1944b : 58 nd (monotypic). Available from **Hupé 1953** : 169 d. A synonym of Eodiscidae Raymond, 1913, in Treatise (: 187). *Note*—Brevidiscinae was first used in Kobayashi 1943 : 39 nd but its type-genus was not validly established until 1944b : 59.

BURNETIDAE [BURNETIELLIDAE, corr. herein] Resser, 1942 : 79 nd. Available from **Hupé 1953** : 197 d. *Burnetia* Walcott, 1924, is a junior homonym and was replaced by *Burnetiella* Lochman, 1958 : 247, which is referred to Dokimocephalidae Kobayashi, 1935, in Treatise (: 281).

CYBELIDAE Holliday, 1942 : 475 nd (mistakenly proposed as a replacement for Encrinuridae Angelin, 1854). Available from **Hupé 1955** : 251 d. Currently considered a subfamily of Encrinuridae (Treatise : 448).

DAWSONIDAE [DAWSONIIDAE, corr. Kobayashi, 1943] Resser, 1937 : 9 nd (apparently mistakenly proposed as a replacement for Eodiscidae Raymond, 1913). Available from **Lermontova 1940** : 122 d. A synonym of Eodiscidae Raymond, 1913, in Treatise (: 187).

DINDYMENINAE Přibyl, 1953 : 20 nd. Available from **Henningsmoen 1959** (Treatise : 448 d, introduced as new.)

DINESIDAE Lermontova, 1940 : 144 nd. Available from **Lermontova 1951** : 108 d, but if the generic grouping of Treatise (: 230) is followed, a junior subjective synonym of Tollaspidae [Tollaspididae, corr. Henningsmoen, 1951] Kobayashi, 1944a : 315 d.

DOLEROLENIDAE Kobayashi, 1951 : 103 nd (monotypic) (as replacement for Olenopsidae K., 1935, itself still not available in 1951). Available from **Hupé 1953** : 179 d.

Enetagnostidae Harrington, 1938 : 149, 157 nd (monotypic). *Enetagnostus* is considered a junior subjective synonym of *Diplagnostus* (Treatise : 175).

HARPIDINAE Raw, 1949 : 514 nd. Introduced again by Whittington 1950a : 303 nd (Harpididae, as new). Available from **Hupé 1953** : 240 d. A full family in Treatise (: 418).

KINGSTONINAE [**KINGSTONIINAE**, corr. Shaw, 1952] Kobayashi, 1933: 142 nd ? Available from **Kobayashi 1935** : 201 d. A full family in Treatise (: 285).

Kootenidae [Kooteniidae, corr. Henningsmoen, 1951] Resser, 1939: 46 nd. In Treatise (: 217) considered a subjective synonym of Dorypygidae Kobayashi, 1935.

LANCASTRIDAE [LANCASTRIIDAE, corr. Henningsmoen, 1951] **Kobayashi, 1935** : 129 d ? (monotypic). Diagnosis in Hupé 1953 : 176 d. In Treatise (: 220) *Lancastria* is referred to Oryctocephalidae Beecher, 1897.

LEJOPYGINAE Harrington, 1938 : 149 nd. Available from **Kobayashi 1939** : 128 d (introduced as new). In Treatise (: 178) *Lejopyge* is referred to Hastagnostidae Howell, 1937.

MARJUMIDAE [**MARJUMIIDAE**, corr. Henningsmoen, 1951] Kobayashi, 1935 : 284 nd. Available from **Hupé 1953** : 204 d, but if the generic grouping of Treatise (: 305) is followed, a junior subjective synonym of Punctulariidae Raymond, 1937 : 1123 d. Lochman (Treatise : 305) recognises a superfamily Marjumiacea.

Olenopsidae Kobayashi, 1935 : 129 nd (monotypic) see Dolerolenidae.

PERONOPSIDAE Westergård, 1936: 28 nd (? monotypic). Available from **Harrington 1938** : 149, 150 d (introduced as new). A synonym of Spinagnostidae Howell, 1935, in Treatise (: 184).

PHILLIPSINELLIDAE Whittington, 1950b : 559, 561 d ? (monotypic). Diagnosis in Hupé 1953 : 224 d.

Ptarmiganidae [Ptarmiganiidae, corr. Henningsmoen, 1951] Resser, 1939 : 31 nd. A synonym of Dolichometopidae Walcott, 1916, in Treatise (: 220).

PTEROCEPHALINAE [**PTEROCEPHALIIDAE**, corr. Lochman, 1956] Kobayashi, 1935: 230 nd. Available from **Lochman 1959** (Treatise : 256 d, a full family), but if the generic grouping therein is followed, a junior subjective synonym of Camaraspididae Lochman, 1953 : 889 d.

STAUROCEPHALINAE Prantl & Přibyl, 1948 : 12 nd ? (monotypic). Available from **Hupé 1953** : 238 d (introduced as new). *Note*—The date of publication of Prantl & Přibyl's article is usually given incorrectly as 1947.

TAIHUNGSHANIDAE [**TAIHUNGSHANIIDAE**, corr. Henningsmoen, 1951] Sun, 1931 : 7 nd (monotypic). Available from **Hupé 1953** : 221 d.

TONKINELLIDAE Reed, 1934 : 9 nd (monotypic). Available from **Hupé 1953** : 186 d. *Tonkinella* is referred to Oryctocephalidae Beecher, 1897, in Treatise (: 220).

Trilobagnostinae Harrington, 1938 : 148 nd. *Trilobagnostus* is referred to Hastagnostidae Howell, 1937, in Treatise (: 179).

Trinucleoidinae Přibyl, 1953 : 15 nd (monotypic). *Trinucleoides* is referred to Dionididae Gürich, 1908, in Treatise (: 425).

XYSTRIDURINAE Whitehouse, 1939: 196 d? (monotypic). Diagnosis in Hupé 1953 : 181 d.

YINITIDAE Hupé, 1953 : 177 (footnote) nd. Available from **Harrington 1959** (Treatise : 205 d).

YOKUSENINAE [YOKUSENIIDAE, corr. Hupé, 1953] Kobayashi, 1935 : 236, 247 nd. Available from **Hupé 1953** : 189 d. *Yokusenia* is considered in Treatise (: 288) a junior subjective synonym of *Lioparia*, which is referred to Anomocaridae Poulsen, 1927 ; Kobayashi has replaced Yokuseninae by Liopariinae (1960 : 391 nd).

In several of the above families there is difficulty in interpreting the provisions of the new Code, and this is particularly so in the case of monotypic families. It is clear that repetition of the characters of the type-genus as the diagnosis of a monotypic family would be a valid procedure, and there is no doubt that the use of some such formula as " the characters of this family are those of its only known genus " is also valid when the generic characters are themselves given (e.g. Platagnostidae Howell, 1935 : 228—not listed above). There are, however, two cases (Brevidiscinae and Taihungshaniinae) in which a generic diagnosis was given without such a linking formula, while for another family (Staurocephalinae) a formula was used but the generic diagnosis was not quoted. These three families cannot be considered to satisfy the requirements of Art. 13a(i) or (ii) and must fail, as must those where neither a generic diagnosis nor a linking formula was given (Bathycheilinae, Peronopsidae, Tonkinellidae, Trinucleoidinae), even though, as with Staurocephalinae, suitable generic diagnoses were extant in the literature at the time. There remain four families (Bavarillinae, Lancastriidae, Phillipsinellidae, Xystridurinae) in which an analysis was given of the generic characters which precluded reference to existing families, although it was not presented as a formal diagnosis of the new family ; this procedure seems to satisfy at least the spirit (if not the letter) of Art. 13a(i) and the families are therefore accepted as available from the date of publication (on the other hand, the analyses accompanying Enetagnostidae, Olenopsidae and Staurocephalinae are here considered not to be adequate diagnoses).

It is clear, though, that there is a considerable subjective element in the above interpretation of the Code as it affects monotypic families, and an alternative procedure (suggested by Mr. R. P. Tripp on reading the draft of this article) would be to accept as available all clearly monotypic families for which an adequate generic diagnosis was extant at the time of erection. This practice would be objective and convenient and would probably correspond to the intentions of the original authors of the families, but it would in most cases infringe the requirements of Art. 13 (on a strict legalistic interpretation of which *all* the monotypic families listed above would be unavailable). It also suffers from the difficulty of determining whether certain families are monotypic or not : for instance, the only genus listed under Peronopsidae Westergård, 1936 : 28 was *Peronopsis* itself and so the family was *de facto* monotypic, although it was apparently intended to replace Tullberg's Section Fallaces and probably therefore to include other genera ; Canotagnostidae[1] Rusconi, 1951 : 13 nd is here considered monotypic even though the genera *Homagnostus* and *Tomagnostus* follow *Canotagnostus* with no intervening family heading.

While it cannot be claimed on the basis of the above discussion that the new provisions will involve very widespread changes in the nomenclature of trilobite families, nevertheless an appreciable number of family names will be affected and the application of the provisions to monotypic families causes considerable uncertainty. If changes on a comparable scale to those in trilobites are caused in other groups the cumulative effect would justify raising at Washington the question of the retrospective nature of the new family provisions.

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[1] This family and Huaquinchaidae Rusconi, 1955 : 39 nd (also monotypic) have been omitted from the list since they are both based on genera which do not themselves appear to be available.

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COMMENTS ON THE PROPOSED DESIGNATION OF A TYPE-SPECIES FOR *LEPIDOPA* STIMPSON, 1858

(see volume 19, pages 125–128)

By Fenner A. Chace, Jr. (*Smithsonian Institution, Washington, D.C., U.S.A.*)

This is one of the few applications requesting the use of the plenary powers of the International Commission that I can support wholeheartedly. There is little doubt that Stimpson misidentified the animal selected as the type-species of *Lepidopa*, and strict application of the Code would not only complicate the nomenclature of an important crustacean genus but it would alter the intent of the author of that genus.

I also concur fully with the decision to accept the principle of priority as far as the name *Thia scutellata* is concerned. Such respect for this basic principle is to be highly commended, especially when it is displayed by one of those who have sometimes sought to suppress its effect on the validity of familiar names.

By Janet Haig (*Allan Hancock Foundation, University of Southern California, Los Angeles, Calif., U.S.A.*)

I wish to register my support of this proposal. I feel that it would be better in this particular case for the Commission to use their plenary powers, rather than to apply the Code strictly and thereby go against the obvious intent of Stimpson to attach the name *Lepidopa* to the anomuran genus for which it is universally used.

COMMENT ON THE PROPOSED SUPPRESSION OF *DENDRASPIS* FITZINGER, 1843. Z.N.(S.) 1500

(see volume 19, pages 189–190)

By Hobart M. Smith (*Department of Zoology and Museum of Natural History, University of Illinois, Urbana, Illinois, U.S.A.*)

There is no question that great confusion in nomenclature would result if *Dendraspis* Fitzinger, 1843, were to be accepted on the grounds of priority, with the type-species originally designated, thus making it the valid name for the genus containing the king cobra. *Dendroaspis* is well fixed at present as the name for the mambas, and *Ophiophagus* for the king cobras ; only perpetuation of these universally-understood names can result from approval of the proposal. Failure to suppress *Dendraspis* Fitzinger, 1843, would in no way contribute to stability of nomenclature ; on the contrary it would result in nomenclatural chaos. Approval of the proposal is strongly recommended.